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[redacted]

P-172

25X1

CONFIDENTIAL

17 December 1956

MEMORANDUM FOR: THE RECORD

SUBJECT : Project Monitor at [redacted]

25X1

1. TIME AND PLACE OF MEETING: The meeting was held 29 November 1956 at [redacted]

25X1

2. ATTENDANCE: [redacted]

25X1

3. DISCUSSION:

a. P-131 - Bookie Unit

Arrangements were made to conduct a series of tests on the Bookie unit during the next project monitor. The system will be set up using two lines at [redacted] and a series of calls will be made from various suburban and local exchanges. An attempt will also be made to complete a call from a long distance point through the bookie unit to a local exchange in New York.

25X1

b. P-135 - VOR

The first prototype of the six new models was hand-carried to Washington. Initial bench tests conducted by the undersigned indicated the unit was not operating satisfactorily. Since a representative from [redacted] visited AFD on 4 December, the prototype was returned to him with instructions that the undersigned desired to have the model back as soon as possible.

25X1

c. P-112 - RF Power Transmission:

It is expected that the passive switches will be completed by the first of the year and that delivery of the entire receiving system will be accomplished by 15 January. Tests are underway at [redacted] to determine the reliability of the switches. It is planned to put them on an operation cycle which causes them to perform their function continually for a period of several weeks.

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4. P-164 - Telephone Transmitter

The following items were brought back from [redacted] 25X1

(1) One AC operated 2 MC receiver

(2) Polarity checkers for the Siemens, Ericsson Hitachi and American 302 telephones

(3) 3 buttons for the type A Hitachi telephone (NEC - One dot)

(4) 10 buttons for the type B Hitachi telephone (Hitachi 2 dots)

It is planned to ship to [redacted] in Japan the following for test and evaluation: 25X1

(1) One AC operated receiver

(2) 4 buttons for the type A Hitachi telephone (2 of each polarity)

(3) 6 buttons for the type B Hitachi telephone (3 of each polarity)

(4) 3 buttons in which only the microphone portion has been changed. A W.E. M-1 button was installed in place of the original microphone structure.

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(4) [redacted] 25X1

e. P-172 - Audio on the Power Line

Investigations are being conducted to determine the suitability of a series of bridge "T" filters in filtering out the line harmonics. This method does not involve any mechanical stability problems that come up when using an electromechanical technique. However, the bridge "T" arrangement does not lend itself to variable line frequency operation. [redacted] was instructed to continue to look into the electromechanical system and obtain comparison data between it and the bridge "T" arrangement. 25X1

f. P-192 - T-CM-1

Various breadboard circuits are being investigated in an effort to achieve maximum circuit efficiency. Circuits involving two subminiature tubes (one oscillator and one amplifier) are being compared to those using a multi element tube which combines the oscillator-amplifier function in one envelope. By using different tubes it is planned to develop two models. One is to be for battery operation and the power output will be limited. The other for AC operation will be capable of delivering more power. It is also planned to investigate the use of a commercially available condenser microphone as the modulating element. This will be compared to the action of the present transmitter built by Raytheon.

Tests run on the Raytheon unit indicate that about 1.5 mw are delivered into a 36 ohm load and that about 1.2 mw are delivered into a 72 ohm load. This means an efficiency of less than 17%.

g. P-195 - Microwave Transmitter

Components are being assembled preparatory to building a breadboard version. The question of weight vs desired operating life of a battery supply still must be compromised. A passive switch is being constructed for use with this transmitter. It will operate on the leading edge of the pulse and after closing will remain closed for a short time before reopening automatically. Specifications for the contacts of the relay will have to be provided. It is expected that the camera solenoids will need 12 volt DC@ 2 ampere or 115 volt @ 1 ampere.

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Distribution:
1 - P-131 1 - P-135 1 - P-112
1 - P-164 1 - P-172 1 - P-[illegible] - P-195

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